

INDEX OF AUTHORS

VOLUME XXXI

TRANSACTIONS OF AMERICAN SOCIETY FOR METALS

January, 1943—December, 1943

A		K	
Angier, R. P.....	675	Kehl, G. L.....	817
Austin, Charles R.....	321, 517	Klein, J. L.....	218
B		L	
Barrow, G. R.....	943	Lubahn, J. K.....	71, 125
Bartholomew, Jr., Edward L....	582	M	
Blanchard, James R.....	849	Manning, G. K.....	8
Boston, O. W.....	955	Martin, D. L.....	675
Bowman, Fred E.....	487	McGuire, Francis T.....	340
Brick, R. M.....	675	Mehl, Robert F.....	613
Buckwalter, T. V.....	559	Miller, R. F.....	817
C		N	
Chipman, John	365	Niconoff, D.	716
Clark, C. L.....	304	Nungester, W. J.....	304
Cohen, Morris	161, 380	P	
Cole, L. E.....	651	Parke, Robert M.....	487, 849, 877
Coleman, Howard S.....	105	Parker, E. R.....	699
Colwell, L. V.....	955	Payson, P.	218
Cook, Earnshaw	41	Prater, T. A.....	517
D		R	
deForest, Taber	739	Rigbey, James	599
Desmond, John K.....	1	Roberts, George A.....	613
Digges, Thomas G.....	753, 777	Romig, O. E.....	980
E		Rose, Robert S.....	161
Ellinger, Finley H.....	89	Rosenberg, Samuel J.....	753, 777
Elsea, A. R.....	459	Rowland, D. H.....	980
F		S	
Fellows, J. A.....	41	Sachs, G.	71, 125
Ferguson, C.	699	Samuels, M. L.....	459
Flinn, R. A.....	41	Smith, G. V.....	817
G		Soler, Gilbert	943
George, P. F.....	423	Sprankle, A. F.....	257
Gordon, Paul	161	Sykes, W. P.....	284
Grant, Nicholas J.....	365	T	
Grube, K.	459	Troiano, Alexander R.....	340
H		V	
Ham, John L.....	877	VanNote, W. G.....	517
Harrington, R. H.....	651	Y	
Herschman, Harry K.....	501	Yeagley, Henry L.....	105
Herzig, Alvin J.....	487, 849, 877	Z	
Hess, J. B.....	423	Zmeskal, Otto	380
Hill, Morse	902, 923		
Horger, O. J.....	559		
Hughes, M. A.....	257		

INDEX OF SUBJECTS AND AUTHORS OF PAPERS

VOLUME XXXI

TRANSACTIONS OF AMERICAN SOCIETY FOR METALS

January, 1943—December, 1943

A

Ac, Critical Point in Iron by a Grain Elimination Method; Determining the—By <i>John K. Desmond</i>	1
Aged Cold-Rolled 1 Per Cent Cadmium-Copper; Precipitation Reaction in: Its Effects on Hardness, Conductivity and Tensile Properties—By <i>R. H. Harrington and L. E. Cole</i>	651
Aggregates; Mechanism and the Rate of Formation of Austenite from Ferrite-Cementite—By <i>George A. Roberts and Robert F. Mehl</i>	613
Aggregates of Ferrite and Cementite in an Iron-Carbon Alloy of 0.5 Per Cent Carbon; Metallographic Study of the Formation of Austenite from—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	753
Aircraft Steels and Its Representation; Hardenability of: End Quench Test—By <i>Morse Hill</i>	902
Alloys; Study of Inverse Segregation Suggests New Method of Making Certain—By <i>M. L. Samuels, A. R. Elsea and K. Grube</i>	459
Alpha Iron Lattice Parameter as Affected by Molybdenum, and an Introduction to the Problem of the Partition of Molybdenum in Steel—By <i>Fred E. Bowman, Robert M. Parke and Alvin J. Herzig</i>	487
Annealed Carbon Strip Steel; Some Factors Affecting Longitudinal Bend Tests on Fine-Grained, Cold-Rolled—By <i>A. F. Sprankle and M. A. Hughes</i>	257
Ar ² Range in Some Iron-Cobalt-Tungsten Alloys—By <i>W. P. Sykes</i>	284
Austenite Decomposition in High Speed Steel; Kinetics of—By <i>Paul Gordon, Morris Cohen and Robert S. Rose</i>	161
Austenite; Effect of Molybdenum on the Rate of Diffusion of Carbon in —By <i>John L. Ham, Robert M. Parke and Alvin J. Herzig</i>	877
Austenite in Eutectoid and Hypereutectoid Steels; Effect of Molybdenum on the Isothermal Subcritical Transformation of—By <i>James R. Blanchard, Robert M. Parke and Alvin J. Herzig</i>	849
Austenite Formation from Aggregates of Ferrite and Cementite in an Iron-Carbon Alloy of 0.5 Per Cent Carbon; Metallographic Study of —By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	753
Austenite/Formation from Ferrite-Cementite Aggregates; Mechanism and the Rate of—By <i>George A. Roberts and Robert F. Mehl</i>	613
Austenite Transformation; A Quantitative Study of—By <i>R. A. Flinn, Earnshaw Cook and J. A. Fellows</i>	41
Austenitic Grain Size of 0.5 Per Cent Carbon Steels and Iron-Carbon Alloy; Influence of Initial Structure and Rate of Heating on the—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	777
Austenitic Manganese Steel; Some Aspects of Strain Hardenability of—By <i>D. Nikonoff</i>	716

B

Bend Tests on Fine-Grained, Cold-Rolled Annealed Carbon Strip Steel; Some Factors Affecting Longitudinal—By <i>A. F. Sprankle and M. A. Hughes</i>	257
Bursting Tests on Notched Alloy Steel Tubing—By <i>G. Sachs and J. D. Lubahn</i>	71

C

Cadmium-Copper; Precipitation Reaction in Aged Cold-Rolled 1 Per Cent: Its Effects on Hardness, Conductivity and Tensile Properties—By <i>R. H. Harrington and L. E. Cole</i>	651
Carbon Alloy and Plain Carbon Steels; Carburizing Characteristics of 0.20 Per Cent—By <i>G. K. Manning</i>	8
Carbon in Austenite; Effect of Molybdenum on the Rate of Diffusion of—By <i>John L. Ham, Robert M. Parke and Alvin J. Herzig</i>	877
Carbon (0.5 Per Cent); Metallographic Study of the Formation of Austenite from Aggregates of Ferrite and Cementite in an Iron-Carbon of—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	753
Carbon-Molybdenum Steel at 850, 1000 and 1100 Degrees Fahr.; Influence of Strain Rate on Strength and Type of Failure of—By <i>R. F. Miller, G. V. Smith and G. L. Kehl</i>	817
Carbon Steel (1 Per Cent); Hardenability Control of—By <i>G. R. Barrow and Gilbert Soler</i>	943
Carbon Steel Plates; Effect of Moderate Cold Rolling on the Hardness of the Surface Layer of 0.34 Per Cent—By <i>Harry K. Herschman</i>	501
Carbon Steels (0.5 Per Cent) and Iron-Carbon Alloy; Influence of Initial Structure and Rate of Heating on the Austenitic Grain Size of—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	777
Carbon Strip Steel; Some Factors Affecting Longitudinal Bend Tests on Fine-Grained, Cold-Rolled Annealed—By <i>A. F. Sprankle and M. A. Hughes</i>	257
Carburizing Characteristics of 0.20 Per Cent Carbon Alloy and Plain Carbon Steels—By <i>G. K. Manning</i>	8
Chemical Reactions at Metallic Surfaces; Method of Thin Films for the Study of Intermetallic Diffusion and—By <i>Howard S. Coleman and Henry L. Yeagley</i>	105
Cobalt-Iron-Tungsten Alloys; Ar ² Range in—By <i>W. P. Sykes</i>	284
Cold-Rolled Annealed Carbon Strip Steel; Some Factors Affecting Longitudinal Bend Tests on Fine-Grained—By <i>A. F. Sprankle and M. A. Hughes</i>	257
Cold Rolling on the Hardness of the Surface Layer of 0.34 Per Cent Carbon Steel Plates; Effect of Moderate—By <i>Harry K. Herschman</i>	501
Commercial Magnesium Alloys; Metallography of—By <i>J. B. Hess and P. F. George</i>	423
Copper Alloys; Rupture Tests at 200 Degrees Cent. on Some—By <i>E. R. Parker and C. Ferguson</i>	699
Copper; Effects of Various Solute Elements on the Hardness and Rolling Textures of—By <i>R. M. Brick, D. L. Martin and R. P. Angier</i>	675
Corrosion of Water Pipes in a Steel Mill—By <i>C. L. Clark and W. J. Nungester</i>	304
Cylindrical Cups; Stress-Strain Measurements in the Drawing of—By <i>Edward L. Bartholomew, Jr.</i>	582

D

Determining the Ac ₃ Critical Point in Iron by a Grain Elimination Method—By <i>John K. Desmond</i>	1
Discontinuities; Fluorescent Penetrant Method of Detecting—By <i>Taber deForest</i>	739
Double-Exposure Radiography; On the Location of Flaws by—By <i>James Rigbey</i>	599
Drawing of Cylindrical Cups; Stress-Strain Measurements in the—By <i>Edward L. Bartholomew, Jr.</i>	582

E

Effect of Elements in Solid Solution on Hardness and Response to Heat Treatment of Iron Binary Alloys—By <i>Charles R. Austin</i>	321
---	-----

Effect of Hardness on the Machinability of Six Alloy Steels—By <i>O. W. Boston and L. V. Colwell</i>	955
Effect of Moderate Cold Rolling on the Hardness of the Surface Layer of 0.34 Per Cent Carbon Steel Plates—By <i>Harry K. Herschman</i>	501
Effect of Molybdenum on the Isothermal Subcritical Transformation of Austenite in Eutectoid and Hypereutectoid Steels—By <i>James R. Blanchard, Robert M. Parke and Alvin J. Herzig</i>	849
Effect of Molybdenum on the Rate of Diffusion of Carbon in Austenite—By <i>John L. Ham, Robert M. Parke and Alvin J. Herzig</i>	877
Effects of Various Solute Elements on the Hardness and Rolling Textures of Copper—By <i>R. M. Brick, D. L. Martin and R. P. Angier</i>	675
Elements in Solid Solution on Hardness and Response to Heat Treatment of Iron Binary Alloys; Effect of—By <i>Charles R. Austin</i>	321
End-Quench Test: Hardenability of Aircraft Steels and Its Representation—By <i>Morse Hill</i>	902
End-Quench Test: Reproducibility—By <i>Morse Hill</i>	923
Eutectoid and Hypereutectoid Steels; Effect of Molybdenum on the Isothermal Subcritical Transformation of Austenite in—By <i>James R. Blanchard, Robert M. Parke and Alvin J. Herzig</i>	849

F

Fatigue Strength of Normalized and Tempered Versus As-Forged Full Size Railroad Car Axles—By <i>O. J. Horger and T. V. Buckwalter</i> ...	559
Ferrite and Cementite Aggregates in an Iron-Carbon Alloy of 0.5 Per Cent Carbon; Metallographic Study of the Formation of Austenite from—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	753
Ferrite-Cementite Aggregates; Mechanism and the Rate of Formation of Austenite from—By <i>George A. Roberts and Robert F. Mehl</i>	613
Fine-Grained, Cold-Rolled Annealed Carbon Strip Steel; Some Factors Affecting Longitudinal Bend Tests on—By <i>A. F. Sprankle and M. A. Hughes</i>	257
Formation of Austenite from Aggregates of Ferrite and Cementite in an Iron-Carbon Alloy of 0.5 Per Cent Carbon; Metallographic Study of the—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	753
Formation of Austenite from Ferrite-Cementite Aggregates; Mechanism and the Rate of—By <i>George A. Roberts and Robert F. Mehl</i>	613
Flaws by Double-Exposure Radiography; On the Location of—By <i>James Rigbey</i>	599
Fluorescent Penetrant Method of Detecting Discontinuities—By <i>Taber deForest</i>	739

G

Galvanized Sheet Steel Using a Specially Prepared Polishing Medium with Controlled pH; Metallography of—By <i>D. H. Rowland and O. E. Romig</i>	980
Grain Elimination Method; Determining the A_{c3} Critical Point in Iron by a—By <i>John K. Desmond</i>	1

H

Hardenability Control of a 1 Per Cent Carbon Steel—By <i>G. R. Barrow and Gilbert Soler</i>	943
Hardenability of Aircraft Steels and Its Representation: End-Quench Test—By <i>Morse Hill</i>	902
Hardenability of a Pure Hypereutectoid Iron-Carbon Alloy; Third Element on—By <i>Charles R. Austin, W. G. VanNote and T. A. Prater</i>	517
Hardening of Tool Steels—By <i>P. Payson and J. L. Klein</i>	218

Hardness and Response to Heat Treatment of Iron Binary Alloys; Effect of Elements in Solid Solution on—By <i>Charles R. Austin</i>	321
Hardness and Rolling Textures of Copper; Effects of Various Solute Elements on the—By <i>R. M. Brick, D. L. Martin and R. P. Angier</i> ..	675
Hardness Effect on the Machinability of Six Alloy Steels; Effect of—By <i>O. W. Boston and L. V. Colwell</i>	955
Hardness of the Surface Layer of 0.34 Per Cent Carbon Steel Plates; Effect of Moderate Cold Rolling on the—By <i>Harry K. Herschman</i>	501
Heat Treatment of Iron Binary Alloys; Effect of Elements in Solid Solution on Hardness and Response to—By <i>Charles R. Austin</i>	321
High Carbon-High Chromium Steels; Tempering of Two—By <i>Otto Zmeskal and Morris Cohen</i>	380
High Chromium-High Carbon Steels; Tempering of Two—By <i>Otto Zmeskal and Morris Cohen</i>	380
High Speed Steel; Kinetics of Austenite Decomposition in—By <i>Paul Gordon, Morris Cohen and Robert S. Rose</i>	161
High Temperature Calorimeter and the Heat of Solution of Silicon in Liquid Iron; Induction Furnace as a—By <i>John Chipman and Nicholas J. Grant</i>	365
Hypereutectoid and Eutectoid Steels; Effect of Molybdenum on the Isothermal Subcritical Transformation of Austenite in—By <i>James R. Blanchard, Robert M. Parke and Alvin J. Herzig</i>	849

I

Induction Furnace as a High Temperature Calorimeter and the Heat of Solution of Silicon in Liquid Iron—By <i>John Chipman and Nicholas J. Grant</i>	365
Influence of Initial Structure and Rate of Heating on the Austenitic Grain Size of 0.5 Per Cent Carbon Steels and Iron-Carbon Alloy—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	777
Influence of Strain Rate on Strength and Type of Failure of Carbon-Molybdenum Steel at 850, 1000 and 1100 Degrees Fahr.—By <i>R. F. Miller, G. V. Smith and G. L. Kehl</i>	817
Initial Structure and Rate of Heating on the Austenitic Grain Size of 0.5 Per Cent Carbon Steels and Iron-Carbon Alloy; Influence of—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	777
Intermetallic Diffusion and Chemical Reactions at Metallic Surfaces; Method of Thin Films for the Study of—By <i>Howard S. Coleman and Henry L. Yeagley</i>	105
Inverse Segregation Suggests New Method of Making Certain Alloys; Study of—By <i>M. L. Samuels, A. R. Elsea and K. Grube</i>	459
Iron (Alpha) Lattice Parameter as Affected by Molybdenum, and an Introduction to the Problem of the Partition of Molybdenum in Steel—By <i>Fred E. Bowman, Robert M. Parke and Alvin J. Herzig</i>	487
Iron Binary Alloys; Effect of Elements in Solid Solution on Hardness and Response to Heat Treatment of—By <i>Charles R. Austin</i>	321
Iron-Carbon Alloy; Influence of Initial Structure and Rate of Heating on the Austenitic Grain Size of 0.5 Per Cent Carbon Steels and—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	777
Iron-Carbon Alloy of 0.5 Per Cent Carbon; Metallographic Study of the Formation of Austenite from Aggregates of Ferrite and Cementite in an—By <i>Thomas G. Digges and Samuel J. Rosenberg</i>	753
Iron-Carbon Alloy; Third Element Effects on Hardenability of a Pure Hypereutectoid—By <i>Charles R. Austin, W. G. VanNote and T. A. Prater</i>	517
Iron-Cobalt-Tungsten Alloys; Ar ⁿ Range in—By <i>W. P. Sykes</i>	284
Iron-Manganese Iron-Rich Alloys; Study of the—By <i>Alexander R. Troiano and Francis T. McGuire</i>	340
Iron-Rich Iron-Manganese Alloys; Study of the—By <i>Alexander R. Troiano and Francis T. McGuire</i>	340

- Isothermal Subcritical Transformation of Austenite in Eutectoid and Hypereutectoid Steels; Effect of Molybdenum on the—By James R. Blanchard, Robert M. Parke and Alvin J. Herzig..... 849

K

- Kinetics of Austenite Decomposition in High Speed Steel—By Paul Gordon, Morris Cohen and Robert S. Rose..... 161

L

- Liquid Iron; Induction Furnace as a High Temperature Calorimeter and the Heat of Solution of Silicon in—By John Chipman and Nicholas J. Grant 365
 Longitudinal Bend Tests on Fine-Grained, Cold-Rolled Annealed Carbon Strip Steel; Some Factors Affecting—By A. F. Sprankle and M. A. Hughes 257
 Low Alloy Steels; Notched Bar Tensile Tests on Heat Treated—By G. Sachs and J. D. Lubahn..... 125

M

- Machinability of Six Alloy Steels; Effect of Hardness on the—By O. W. Boston and L. V. Colwell 955
 Magnesium Alloys; Metallography of Commercial—By J. B. Hess and P. F. George 423
 Manganese Steel; Some Aspects of Strain Hardenability of Austenitic—By D. Niconoff 716
 Mechanism and the Rate of Formation of Austenite from Ferrite-Cementite Aggregates—By George A. Roberts and Robert F. Mehl..... 613
 Metallic Surfaces; Method of Thin Films for the Study of Intermetallic Diffusion and Chemical Reactions at—By Howard S. Coleman and Henry L. Yeagley 105
 Metallographic Study of the Formation of Austenite from Aggregates of Ferrite and Cementite in an Iron-Carbon Alloy of 0.5 Per Cent Carbon—By Thomas G. Digges and Samuel J. Rosenberg..... 753
 Metallography of Commercial Magnesium Alloys—By J. B. Hess and P. F. George 423
 Metallography of Galvanized Sheet Steel Using a Specially Prepared Polishing Medium with Controlled pH—By D. H. Rowland and O. E. Romig 980
 Method of Thin Films for the Study of Intermetallic Diffusion and Chemical Reactions at Metallic Surfaces—By Howard S. Coleman and Henry L. Yeagley 105
 Molybdenum Effect on the Isothermal Subcritical Transformation of Austenite in Eutectoid and Hypereutectoid Steels—By James R. Blanchard, Robert M. Parke and Alvin J. Herzig..... 849
 Molybdenum Effect on the Rate of Diffusion of Carbon in Austenite—By John L. Ham, Robert M. Parke and Alvin J. Herzig..... 877
 Molybdenum-Carbon Steel at 850, 1000 and 1100 Degrees Fahr.; Influence of Strain Rate on Strength and Type of Failure of—By R. F. Miller, G. V. Smith and G. L. Kehl..... 817
 Molybdenum in Steel; Alpha Iron Lattice Parameter as Affected by Molybdenum, and an Introduction to the Problem of the Partition of —By Fred E. Bowman, Robert M. Parke and Alvin J. Herzig..... 487

N

- Normalized and Tempered Versus As-Forged Full Size Railroad Car Axles; Fatigue Strength of—By O. J. Horger and T. V. Buckwalter 559

Notched Alloy Steel Tubing; Bursting Tests on—By G. Sachs and J. D. Lubahn	71
Notched Bar Tensile Tests on Heat Treated Low Alloy Steels—By G. Sachs and J. D. Lubahn	125

O

On the Location of Flaws by Double-Exposure Radiography—By James Rigbey	599
---	-----

P

Partition of Molybdenum in Steel; Alpha Iron Lattice Parameter as Affected by Molybdenum, and an Introduction to the Problem of the —By Fred E. Bowman, Robert M. Parke and Alvin J. Herzig	487
Plain Carbon Steels; Carburizing Characteristics of 0.20 Per Cent Carbon Alloy and—By G. K. Manning	8
Plates; Effect of Moderate Cold Rolling on the Hardness of the Surface Layer of 0.34 Per Cent Carbon Steel—By Harry K. Herschman	501
Polishing Medium with Controlled pH; Metallography of Galvanized Sheet Steel Using a Specially Prepared—By D. H. Rowland and O. E. Romig	980
Precipitation Reaction in Aged Cold-Rolled 1 Per Cent Cadmium-Copper: Its Effects on Hardness, Conductivity and Tensile Properties—By R. H. Harrington and L. E. Cole	651
Pure Hypereutectoid Iron-Carbon Alloy; Third Element Effects on Hardenability of a—By Charles R. Austin, W. G. VanNote and T. A. Prater	517

Q

Quantitative Study of Austenite Transformation—By R. A. Flinn, Earnshaw Cook and J. A. Felloves	41
---	----

R

Radiography; On the Location of Flaws by Double-Exposure—By James Rigbey	599
Railroad Car Axles; Fatigue Strength of Normalized and Tempered Versus As-Forged Full Size—By O. J. Horger and T. V. Buckwalter	559
Rate of Diffusion of Carbon in Austenite; Effect of Molybdenum on the —By John L. Ham, Robert M. Parke and Alvin J. Herzig	877
Rate of Formation of Austenite from Ferrite-Cementite Aggregates; Mechanism and the—By George A. Roberts and Robert F. Mehl	613
Rate of Heating on the Austenitic Grain Size of 0.5 Per Cent Carbon Steels and Iron-Carbon Alloy; Influence of Initial Structure and—By Thomas G. Digges and Samuel J. Rosenberg	777
Rolling Textures of Copper; Effects of Various Solute Elements on the Hardness and—By R. M. Brick, D. L. Martin and R. P. Angier	675
Rupture Tests at 200 Degrees Cent. on Some Copper Alloys—By E. R. Parker and C. Ferguson	699

S

Sheet Steel Using a Specially Prepared Polishing Medium with Controlled pH; Metallography of Galvanized—By D. H. Rowland and O. E. Romig	980
Silicon in Liquid Iron; Induction Furnace as a High Temperature Calorimeter and the Heat of Solution of—By John Chipman and Nicholas J. Grant	365

Solid Solution on Hardness and Response to Heat Treatment of Iron Binary Alloys; Effect of Elements in—By <i>Charles R. Austin</i>	321
Solute Elements on the Hardness and Rolling Textures of Copper; Effects of Various—By <i>R. M. Brick, D. L. Martin and R. P. Angier</i> ...	675
Some Aspects of Strain Hardenability of Austenitic Manganese Steel—By <i>D. Niconoff</i>	716
Some Factors Affecting Longitudinal Bend Tests on Fine-Grained, Cold-Rolled Annealed Carbon Strip Steel—By <i>A. F. Sprankle and M. A. Hughes</i>	257
Strain Hardenability of Austenitic Manganese Steel; Some Aspects of—By <i>D. Niconoff</i>	716
Strain Rate on Strength and Type of Failure of Carbon-Molybdenum Steel at 850, 1000 and 1100 Degrees Fahr.; Influence of—By <i>R. F. Miller, G. V. Smith and G. L. Kehl</i>	817
Stress-Strain Measurements in the Drawing of Cylindrical Cups—By <i>Edward L. Bartholomew, Jr.</i>	582
Strip Steel; Some Factors Affecting Longitudinal Bend Tests on Fine-Grained, Cold-Rolled Annealed Carbon—By <i>A. F. Sprankle and M. A. Hughes</i>	257
Study of Inverse Segregation Suggests New Method of Making Certain Alloys—By <i>M. L. Samuels, A. R. Elsea and K. Grube</i>	459
Study of the Iron-Rich Iron-Manganese Alloys—By <i>Alexander R. Troiano and Francis T. McGuire</i>	340

T

Tantalum-Carbon System—By <i>Finley H. Ellinger</i>	89
Tempered and Normalized Versus As-Forged Full Size Railroad Car Axles; Fatigue Strength of—By <i>O. J. Horger and T. V. Buckwalter</i>	559
Tempering of Two High Carbon-High Chromium Steels—By <i>Otto Zmeskal and Morris Cohen</i>	380
Tensile Tests on Heat Treated Low Alloy Steels; Notched Bar—By <i>G. Sachs and J. D. Lubahn</i>	125
Thin Films for the Study of Intermetallic Diffusion and Chemical Reactions at Metallic Surfaces; Method of—By <i>Howard S. Coleman and Henry L. Yeagley</i>	105
Third Element Effects on Hardenability of a Pure Hypereutectoid Iron-Carbon Alloy—By <i>Charles R. Austin, W. G. VanNote and T. A. Prater</i>	517
Tool Steels; Hardening of—By <i>P. Payson and J. L. Klein</i>	218
Tubing; Bursting Tests on Notched Alloy Steel—By <i>G. Sachs and J. D. Lubahn</i>	71
Tungsten-Iron-Cobalt Alloys; Ar ^o Range in—By <i>W. P. Sykes</i>	284
Water Pipes in a Steel Mill; Corrosion of—By <i>C. L. Clark and W. J. Nungester</i>	304

